

# ATKINSON ANWR 1999 LISBURNE SAMPLES

All samples collected were spot samples. Age and formation calls are based on biostratigraphy of the Lisburne Group in the Arctic National Wildlife Refuge as described in Krumhardt and others (1996). This report is not to be quoted or paraphrased in publication without a final check by Krumhardt.

FIELD NO.	STRATIGRAPHIC POSITION & LOCATION	CONODONTS	AGE/FORMATION	BIOFACIES	CAI	REMARKS
99PKA010F	Collected as upper Wahoo? Straight Creek isocline 69 19 55-145 30 26 T. 1S, R. 27E sec. 25, NW 1/4	2 Pa elements <i>Rhachistognathus minutus</i> subsp. indet. 1 Pa juvenile element <i>Rhachistognathus</i> sp. indet. 1 Pa element <i>Rhachistognathus</i> ? UNASSIGNED ELEMENTS: 6 indet. bar, blade, and platform elements	Pennsylvanian: Morrowan to early Atokan, (lower <i>minutus</i> fauna to <i>Idiogoniatodus</i> fauna), upper Wahoo Lms.	Indeterminate (too few conodonts): probably normal marine, shallow, high energy open-marine near shoal depositional environment	6	5.2 kg of rock processed. 160 g of 20-140 mesh residue. Heavy-mineral concentrate: abundant dolomite, weathered pyrite and minor phosphatized bioclasts. Other picked: 7 gastropod stinkerns. Elements have sucrosic texture and healed fractures.
99PKA010G	Collected as upper Alapat? Straight Creek isocline 69 19 59-145 30 13 T. 1S, R. 27E sec. 25, NW 1/4	4 Pa cavusgnathid fragments	Mississippian (late Meramecian to Chesterian), Pennsylvanian to Lower Permian, upper Alapat Lms? (based on field call)	Indeterminate (too few conodonts)	6	5.8 kg of rock processed. 15 g of 20-140 mesh residue. Heavy-mineral concentrate: abundant dolomite, weathered pyrite and minor phosphatized bioclasts. Elements have sucrosic texture.
99PKA012A	Collected as upper Alapat? North Shublik Mountains 69 30 27-145 35 04 T. 2N, R. 27E sec. 19, SE 1/4	1 Pa element <i>Adetognathus laetus</i> (Gunnell)? 6 Pa elements (4 juvenile) <i>Cavusgnathus unicornis</i> Youngquist and Miller 7 Pa cavusgnathid fragments 5 Pa elements <i>Gnathodus girtyi</i> Hass 2 Sc elements <i>Kladognathus</i> sp. indet. 1 Pa <i>Rhachistognathus muricatus</i> (Dunn) UNASSIGNED ELEMENTS: 1 Pa, 5 M, and 2 Sc 177 indet. bar, blade, and platform elements	Late Mississippian (Upper <i>muricatus</i> Subzone, very latest Chesterian), upper Alapat Lms. or lower Wahoo Lms.	Open-platform to open-marine, relatively shallow-water depositional environment.	5.5 to 6	5.8 kg of rock processed. 5 g of 20-140 mesh residue. Heavy-mineral concentrate: well-rounded dolomite, weathered pyrite and phosphatized bioclasts. Elements have sucrosic texture.
99PKA012C	Collected as upper Alapat? North Shublik Mountains 69 30 33-145 34 09 T. 2N, R. 27E sec. 20, SW 1/4	10 Pa elements <i>Cavusgnathus unicornis</i> Youngquist and Miller 26 Pa cavusgnathid fragments 1 Pa element (juvenile) <i>Gnathodus girtyi</i> simplex Dunn? UNASSIGNED ELEMENTS: 1 Pb, 2 M, and 1 Sc 157 indet. bar, blade, and platform elements	Late Mississippian (Chesterian), Alapat Lms. or lower Wahoo Lms.	Open-platform, relatively shallow-water depositional environment.	5.5 to 6	6.1 kg of rock processed. 13 g of 20-140 mesh residue. Heavy-mineral concentrate: well-rounded dolomite, weathered pyrite and phosphatized bioclasts. Elements have sucrosic texture and are well rounded
99PKA012F	Collected as lower Wahoo? North Shublik Mountains 69 30 45-145 32 54 T. 2N, R. 27E sec. 20, SE 1/4	6 Pa elements <i>Cavusgnathus</i> ? <i>tythius</i> Brown and Flexroad 22 Pa cavusgnathid fragments 1 Pa <i>Rhachistognathus muricatus</i> (Dunn) UNASSIGNED ELEMENTS: 1 Pb, and 1 Sa 8 indet. bar, blade, and platform elements	Late Mississippian or Early Pennsylvanian (upper <i>muricatus</i> Subzone, very latest Chesterian or <i>noduliferus</i> <i>primus</i> Zone, very earliest Morrowan), lower Wahoo or basal part of upper Wahoo Lms.	Open-platform, relatively shallow-water depositional environment.	4 and 6	5.8 kg of rock processed. 120 g of 20-140 mesh residue. Heavy-mineral concentrate: abundant dolomite and minor phosphatized grains. Elements have sucrosic texture and are well rounded. Other picked: 5 ichthyoliths and 3 indet. grains.
99PKA013F	Collected as upper Wahoo? South Shublik Mountains 69 28 49-145 34 16 T. 2N, R. 27E sec. 32, SW 1/4	4 Pa cavusgnathid fragments 1 Pa element <i>Idiogoniatodus</i> sp. indet. 1 Pa element (juvenile) <i>Rhachistognathus</i> sp. indet. UNASSIGNED ELEMENTS: 8 indet. bar, blade, and platform elements	Pennsylvanian ( <i>Idiogoniatodus</i> Fauna, late Morrowan to early Atokan), upper Wahoo Lms.	Indeterminate (too few conodonts): probably normal marine, shallow, high energy open-marine near shoal depositional environment	4 and 6	4.1 kg of rock processed. 7 g of 20-140 mesh residue. Heavy-mineral concentrate: Primarily weathered pyrite with minor dolomite. Elements have sucrosic texture and are well rounded.

<b>99PKA013G</b>	Collected as upper Wahoo? South Shublik Mountains 69 28 51-145 31 44 T. 2N, R. 27E sec. 33, SW 1/4	1 Pa element <i>Declinognathodus noduliferus</i> <i>japonicas</i> (Igo and Koike) 1 Pa element (juvenile) <i>Declinognathodus noduliferus</i> (Elison and Graves) 3 Pa elements <i>Idiognathodus incurvus</i> Dunn? 1 Pa element <i>Idiognathodus sinuosus</i> Elison and Graves 3 Pa elements <i>Idiognathodus</i> spp. indet. 1 Pa element <i>Rhachistognathus minutus declinatus</i> Baesemann and Lane 1 Pa element <i>Rhachistognathus muricatus</i> (Dunn) 1 Pa element <i>Rhachistognathus</i> sp. indet. UNASSIGNED ELEMENTS:	Pennsylvanian ( <i>Idiognathodus</i> Fauna, early Atokan), upper Wahoo Lms.	Open-marine depositional environment.	4 and 6	6.3 kg rock processed. 6 g of 20-140 mesh residue. Heavy-mineral concentrate: abundant large grains of weathered pyrite and minor dolomite. Elements have sucrosic texture and a few elements are complete.
<b>99PKA013I</b>	Collected as lower Alapah? South Shublik Mountains 69 29 14-145 32 05 T. 2N, R. 27E sec. 32, NE 1/4	6 indet. bar, blade, and platform elements 20 Pa elements <i>Cavusgnathus unicornis</i> Youngquist and Miller 10 Pa cavusgnathid fragments <i>Kladognathus</i> sp. indet.: 5 M and 1 Sp-Sc elements UNASSIGNED ELEMENTS: 1 Pb and 1 M	Mississippian (Meramecian to Chesterian), Alapah Lms., or lower Wahoo Lms.	Open-platform, relatively shallow-water depositional environment.	4.5 and 6	6.9 kg rock processed. 49 g of 20-140 mesh residue. Heavy-mineral concentrate: abundant phosphatized bioclasts with minor dolomite and fresh pyrite. Elements have sucrosic texture. Other picked: 5 ichthyoliths.
<b>99PKA013K</b>	Collected as upper Alapah? South Shublik Mountains 69 29 25-145 31 55 T. 2N, R. 27E sec. 32, NE 1/4	43 indet. bar, blade, and platform elements 1 indet. bar fragment	Mississippian or Pennsylvanian based on same locality as above	Indeterminate	Indeterminate	7.9 kg rock processed. 1 g of 20-140 mesh residue. Heavy-mineral concentrate: abundant dolomite and phosphatized grains

Krumhardt, A.P., Harris, A.G., and Watts, K.F., 1996. Lithostratigraphy, microolithofacies, and conodont biostratigraphy and biofacies of the Wahoo Limestone (Carboniferous), eastern Sadlerochit Mountains, northeast Brooks Range, Alaska: U.S. Geological Survey Professional Paper, 1568, 71 p.